

Ch 4 Test (Monday)

4.1-4.8 (not 4.4)

- 4.1--Organizing data, terminology
 4.2--Operations (+, -, scalar mult.)
 4.3--Multiplying Matrices (word problems)

- 4.5--Determinants (2x2, 3x3, area, expansion by minors)
 4.6--Cramer's Rule

$$x = \frac{D_x}{D} \quad y = \frac{D_y}{D}$$

- 4.7--Identity, Inverse, decoding messages
 4.8--Solving systems using matrix equations

$$I = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} \quad A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$$

$$A^{-1} = \begin{bmatrix} d & -b \\ -c & a \end{bmatrix} \cdot \frac{1}{D}$$

$a \quad d - b \quad c$

4.8

$$\begin{aligned} 2x + y &= 4 \\ 3x + y &= 8 \end{aligned}$$

$$\begin{bmatrix} 2 & 1 \\ 3 & 1 \end{bmatrix}_{2 \times 2} \begin{bmatrix} x \\ y \end{bmatrix}_{2 \times 1} = \begin{bmatrix} 4 \\ 8 \end{bmatrix}_{2 \times 1}$$

A
 B
 $A^{-1}B$

4.7

$$\text{If } A \cdot B = I$$

$$\text{and } B \cdot A = I$$

then A & B are inverses

Review Problems (HW)

p209-214

1, 3, 6, 7, 11, 15, 18, 20, 21, 28, 30,
33, 37, 38, 40, 42, 47, 48

Look at example 3 on p169